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June 6, 1984

Robert Fabris
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Dear Bob:

I saw your request for programs in the last issue of the Arcadian, so I have included two programs which I've written from scratch to be used for the newsletter. Enclosed is also the tape containing the programs.

The first program is called the "Game of War", it starts at tape counter number 20 and is duplicated at counter 30 and 40. This is the classic game of war with the computer doing all the work and the players watching the outcome.

The second game is called "Koncentration", it starts at tape counter number 60 and is duplicated at counter 70 and 80. This is a two player game using the keypad and the triggers (two hand controllers) It is a take-off the TV game called Concentration. The object is to match the letters and win the most points. There are levels of play, easy and hard. See the instructions for more detail.

I don't know if these programs qualify for your contest, but if they do please enter me. My main objective is to provide your readers with these programs so that they may be published in the Arcadian and hopefully enjoyed by the readership.

I don't have a printer, so the typed programs will have to serve as the progrm listings. I have enjoyed the newsletter very much and look forward to more difficult programs and routines from the good programmers out there.

Well, I hope these programs help fill the Arcadian. Please let me know if you have any questions. George Moses and Don Gladden know me through the Michigan AstroBugs.

Yours truly,

Edward Mahony

KONCENTRATION

```
1. By Edward Mahoney
2. May 27, 1984
3  CLEAR;*(38)=0;*(39)=0
4  T=200;D=3;NT=8;S=36;BC=176;FC=101;CX=H;CY=-F;
   PRINT "KONCENTRATION",;CX=H;CY=16;NT=0
5  PRINT "EASY=1";CX=H;PRINT "HARD=2";
   INPUT "1 OR 2➡"G;NT=8;&(9)=255
6  FOR I=1TO36STEP2;*(I)=RND (26)+64;*(I+1)=*(I);
   NEXT I;FOR I=1TO36
7  A=RND (36);*(0)=*(A);*(A)=*(I);*(I)=*(0);NEXT I
8  A=RND (36);B=RND (36);IF A#BIF *(A)=*(B) *(A)=36;
   *(B)=36;BOX 0,0,159,F,2;GOTO 10
9  GOTO 8
10 BC=RND (32)x8;FC=RND (32)x8-3;FOR Y=-28TO35STEP16;
   MU=Y;MU=142;FOR X=-63TO80STEP 16;MU=X; BOX X,Y,15,15,1
15 BOX X,Y,9,9,D;NEXT X;NEXT Y;MU=60;MU=53;MU=44;MU=35;E=1
20 FOR Y=-28TO35STEP 16;FOR X=-63TO80STEP 16;CX=X;CY=Y;
   IF G=1 IF D=3 TV=*(E)
30 IF D=1 CX=X-3
40 IF D=1 IF E<10PRINT #0,0,E,
50 IF D=1 IF E>9PRINT #0,E,
140 E=E+1;NEXT X;NEXT Y;MU=160;MU=140;MU=136;MU=120
170 IF TR(1)GOTO T
180 MU=50;MU=39;MU=44;GOTO 170
200 D=1;T=507;M=1;GOTO 10
250 NT=0;CX=12;CY=-F;IF T=1 PRINT "PLAYER 1",;RETURN
255 PRINT "PLAYER 2",;RETURN
300 GOSUB J;NT=0;CX=-70;CY=F;INPUT "BOX 1"A;CX=-46;CY=F;
   C=A;GOSUB K;CX=-70;CY=32;INPUT "BOX 2"B
350 IF A=B CX=-69;CY=-F;PRINT "BOX 2 = BOX 1 NO! NO!",;
   NT=50;GOSUB L;BOX 0,F,159,9,2;GOTO 300
400 CX=-46;CY=32;C=B;GOSUB K;IF *(A)=36 IF *(B)=36GOTO N
405 IF *(A)=36GOTO ●
410 IF *(B)=36GOTO ●
420 IF *(A)=*(B) GOTO 3020
500 CX=-60;CY=-F;PRINT "NO MATCH",;NT=20;GOSUB L
502 IF S<36CX=-60;CY=-F;GOSUB J;NT=0;PRINT "GAME OVER PULL TR(1)",;
   GOTO J+Q
505 IF T=1T=2;GOSUB 250;GOTO 510
507 T=1;GOSUB 250
510 IF TR(T) GOTO 300
515 IF S=0 GOTO 502
520 GOTO 510
```

```
1000  PRINT "MATCH!!",;NT=50;MU=50;MU=60;MU=33;MU=39;NT=5;
      E=1;FOR Y=-28TO35STEP 16;FOR X=-63TO80STEP16;CX=X;CY=Y
1010  MU=X;MU=Y;IF E=A C=A;S=S-1;GOTO P
1020  IF E=B C=B;S=S-1;GOTO P
1090  E=E+1;NEXT X;NEXT Y;RETURN
2200  PRINT #0,C,"=",;TV=*(C);RETURN
2300  BOX X,Y,15,15,2;TV=*(C);*(C)=0;GOTO 1090
2400  FOR I=1TO3;MU=241;MU=216;MU=205;NEXT I;RETURN
3000  *(T+37)=*(T+37)+164
3010  *(T+37)=*(T+37)+164
3020  *(T+37)= *(T+37)+*(A)+*(B)
3030  CX=25;CY=F;IF M PRINT "1→";CX=25;PRINT "2→";M=0
3040  CX=F;CY=F;PRINT #1,*(38);CX=F;PRINT #1,*(39)
3050  CX=-30;CY=-F;GOSUB Q;GOSUB 250;GOTO 510
4000  BOX -F,36,81,16,2;BOX 0,-F,159,9,2;RETURN
5000  IF TR(1) RUN
5010  GOTO J+Q
```

NOTE: ALL LETTER "O's" USED AS VARIABLES ARE DARKENED IN.

AFTER THE PROGRAM HAS BEEN TYPED, ENTER THESE VALUES FOR THE FOLLOWING LETTERS:

F=40; H=-39; J=4000; K=2200; L=2400; N=3000; O=3010; P=2300; Q=1000

This is a two player game using the trigger to start play and the keypad to enter the box numbers for matching. Points are awarded based on the numeric value of the letter matched. Bonus points are awarded if a "$" dollar sign is matched with a letter (164 points). The "$" is also a wild card allowing the player to continue. The game is finished when all the letters have been matched or no matched letters are left. There are two levels of play: Easy level shows the letters that are in the board to be matched (use this level for youngsters); Hard level does not show the letters. Pull trigger #1 to initiate the game when the numbers appear on the board. Good Luck.

THE GAME OF WAR

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```
 1. The Game of War
 2. By Edward Mahoney
 3. June 2, 1984
10. CLEAR; BC=10;FC=190;&(9)=87;&(0)=43;&(1)=43;&(2)=126;
    &(3)=126;GOSUB 15;GOTO S-5
15. CY=0;CX=-27;PRINT "SHUFFLING";FOR I=1TO 300
16. A=RND (52);B=RND (52);*(0)=*(A);*(A)=*(B);*(B)=*(0);
    NEXT I;RETURN
20. C=(Ex2)+T;RETURN
30. D=(Fx2)◆T;RETURN
40. G=*(E)÷Q;●=*(F)÷Q;RETURN
50. I=*(I)÷Q;RETURN
61. TV=74;RETURN
62. TV=81;RETURN
63. TV=75;RETURN
64. TV=65;RETURN
70. IF (M-U◀1)+(N-U◀1)GOTO S
75. RETURN
80. L=53;FOR CY=24TO -8STEP -8;FOR CX=-70TO 70STEP 132;TV=*(L);
    NEXT CX;L=L+1;NEXT CY
90. CX=-65;CY=35;GOSUB 92; CX=20;GOSUB 92;RETURN
92. PRINT "CARD #",;RETURN
100. L=50;H=-50;B=M-40;J=N-40;Y=B
110. FOR W=1TO 2;BOX H,-10,22,62,2
120. FOR A=-42TO YSTEP 2;BOX H,A,22,1,1
130. NEXT A;H=L;Y=J;NEXT W
200. FOR A=-60TO -38
210. BOX -H,B,22,1,1;BOX -H,B,22,1,2
220. BOX A,B,3,1,2;BOX A+18,B,3,1,1
230. BOX L,J,22,1,1;BOX L,J,22,1,2
240. BOX -A,J,3,1,2;BOX -A-18,J,3,1,1
250. NEXT A;X=-28;L=-37;H=-2
260. FOR W=1TO2;FOR Y=BTO LSTEP H
270. BOX X,Y,20,1,3;BOX X,Y,20,1,3
280. BOX X,B,20,2,2;NEXT Y;L=20;H=2;B=J;X=28;NEXT W
290. BOX X,-31,20,2,2;BOX 20,J,39,2,2
300. BOX 0,-30,17,20,1;BOX 0,-30,13,18,2
310. BOX 0,30,17,20,1;BOX 0,30,13,18,2
320. X=-2;RETURN
```

NOTE: THE PERIOD (.) IS NOT NEEDED FOR THE LINE NUMBERS AFTER LINE NUMBER THREE (3). STARTING WITH LINE NUMBER TEN (10) LEAVE OUT THE PERIODS.

```
 400. BOX 0,-30,17,20,3;BOX 0,-30,17,20,1
 410. BOX 0,30,17,20,3;BOX 0,30,17,20,1;RETURN
 420. BOX 0,0,70,24,2;RETURN
 500. FOR Z=KTO PSTEP 2;IF %(Z)=87 %(Z)=L
 520. NEXT Z;U=0;RETURN
 800. CX=-27;CY=35;PRINT #2,E,;CX=58;PRINT #2,F,
 810. CX=X;CY=Y+4;IF I#10BOX X+4,CY,8,8,2
 820. IF I 10GOSUB I+50;GOTO 840
 830. PRINT #0,I,
 840. CX=X+6;CY=Y-5;TV=RM;RETURN
1000. U=0;M=26;N=26;E=RND (52);F=RND (52);GOSUB 80;GOSUB 20;
      GOSUB 30;GOSUB Q
1040. GOSUB 70;IF E52E=1;GOSUB 20
1050. IF %(C)#77E=E+1;GOSUB 20;GOTO V
1060. IF F52F=1;GOSUB 30
1070. IF %(D)#89F=F+1;GOSUB 30;GOTO 1060
1080. I=E;GOSUB 50;Y=-30;GOSUB R;I=F;GOSUB 50;Y=30;GOSUB R
1100. GOSUB 40;IF G=●;CX=-20;CY=8;PRINT "__WAR";U=U+1;GOSUB 70;
      %(C)=87;%(D)=87;GOTO 2040
2000. CX=-20;CY=-8;IF G●PRINT "◆ I WIN";M=M+U+1;N=N-U-1;
      L=77;%(D)=L;IF U GOSUB 500
2010. IF G◆PRINT "YOU WIN ◆";N=N+U+1;M=M-U-1;L=89;%(C)=L;
      IF U GOSUB 500
2030. CX=-71,CY=-24;PRINT #2,M,;CX=68;PRINT #2,N;CX=-68;
      PRINT "◆",;CX=69;PRINT "◆",
2040. E=E+1;F=F+1;GOSUB 20;GOSUB 30;FOR Z=1TO V;NEXT Z
2050. GOSUB 400;GOSUB 420;GOSUB Q;GOTO V
5000. FOR I=1TO 10;GOSUB 420;CX=-27;CY=0;PRINT "_GAME OVER",
5010. FOR Z=1TO V;NEXT Z;NEXT I
```

NOTE: ALL LETTER "O's" USED AS VARIABLES ARE DARKENED IN.

AFTER THE PROGRAM HAS BEEN TYPED, ENTER THESE VALUES FOR THE FOLLOWING LETTERS:

K=20262; P=20364; Q=100; R=800; S=5000; T=20260; V=1040

SEE THE NEXT PAGE FOR THE VARIABLE DATA THAT MUST BE INPUTTED INTO MEMORY AND THE (*) ARRAYS.

This is a two player or one player game where the computer does all the work and you just watch to see who wins. It is the classic game of war where each player tries to take the other players card with a larger card. If the cards match each other, then a "war" condition exists and the next cards are selected to see who wins the war. Points are awarded based on the number of cards won. The player who takes all the other player's cards wins. This game can take several hours if the game conditions are right. The cards are shuffled at the beginning of each game, but at the end of every game reload the program and let the computer reshuffle since the ownership of each card has been altered during the game.

1. First you must load the ownership of each card into memory using this unnumbered routine:

```
FOR I=20262 TO 20364 STEP 4;%(I)=77;%(I+2)=89;NEXT I
```

2. Then you should randomize the ownership of the cards by using the the following unnumbered routine:

```
FOR I=1TO 300;A=RND (52)x2+20260;B=RND (52)x2+20260;*(0)=%(A);
%(A)=%(B);%(B)=*(0);NEXT I
```

3. Use the routine shown in Volume 6 No. 6 page 58 (shoot the duck) to load and save the data onto the tape. Use the following routine to load onto the tape:

```
:PRINT %(20262),104
```

4. Type in the program and also load the card values into the (*) array after the program has been typed. Use the following unnumbered routine to load the card values:

```
FOR I=1TO 57; PRINT I,;INPUT ""*(I);NEXT I
```

Load the following data using the above routine, go down each column:

1467	1468	1472	1483	83
267	268	272	283	67
367	368	372	383	79
467	468	472	483	82
567	568	572	583	69
667	668	672	683	
767	768	772	783	
867	868	872	883	
967	968	972	983	
1067	1068	1072	1083	
1167	1168	1172	1183	
1267	1268	1272	1283	
1367	1368	1372	1383	

5. Save the main program and the card values in the array using the following routine:

```
:PRINT %(-24576),900
:PRINT %(20000),46
```

6. Then load from the tape back into memory of the computer the program and memory and arrays using the following routine:

```
:INPUT %(20262);:INPUT %(-24576);:INPUT %(20000)
```

7. Then save the program in one block on tape using the following routine:

```
:PRINT %(16384),2010
```

NOTE: I HAD TROUBLE WHEN LOADING THE PROGRAM BACK INTO MEMORY USING :INPUT. SO JUST TYPE "RUN" GO WHEN LOADED.